United Nations

Framework Convention on Climate Change

FCCC/SBI/ICA/2017/TASR.1/MNG

Distr.: General
11 June 2018

English only

Technical analysis of the first biennial update report of Mongolia submitted on 30 August 2017

Summary report by the team of technical experts

Summary

According to decision 2/CP.17, paragraph 41(a), Parties not included in Annex I to the Convention, consistently with their capabilities and the level of support provided for reporting, were to submit their first biennial update report (BUR) by December 2014. As mandated, the least developed country Parties and small island developing States may submit BURs at their discretion. This summary report presents the results of the technical analysis of the first BUR of Mongolia conducted by a team of technical experts in accordance with the modalities and procedures contained in the annex to decision 20/CP.19.

GE.18-09477(E)

1809477

Please recycle

Contents

		Paragraphs	*Page*
	Abbreviations and acronyms		3
I.	Introduction and process overview	1–8	4
	A. Introduction	1–4	4
	B. Process overview	5–8	4
II.	Technical analysis of the biennial update report	9–63	4
	A. Scope of the technical analysis	9–10	4
	B. Extent of information reported	11–12	5
	C. Technical analysis of the information reported	13–61	5
	D. Identification of capacity-building needs	62–63	12
III.	Conclusions	64–69	13
Annexes			
I.	Extent of the information reported by Mongolia in its first biennial update report		15
II.	Documents and information used during the technical analysis		21

Abbreviations and acronyms

2006 IPCC Guidelines	*2006 IPCC Guidelines for National Greenhouse Gas Inventories*
AD	activity data
BUR	biennial update report
CDM	clean development mechanism
CGE	Consultative Group of Experts on National Communications from Parties not included in Annex I to the Convention
CH_4	methane
CO_2	carbon dioxide
CO_2 eq	carbon dioxide equivalent
EF	emission factor
GDP	gross domestic product
GEF	Global Environment Facility
GHG	greenhouse gas
HFC	hydrofluorocarbon
ICA	international consultation and analysis
IPCC	Intergovernmental Panel on Climate Change
IPCC good practice guidance	*Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*
IPCC good practice guidance for LULUCF	*Good Practice Guidance for Land Use, Land-Use Change and Forestry*
LULUCF	land use, land-use change and forestry
MRV	measurement, reporting and verification
N_2O	nitrous oxide
NA	not applicable
NAMA	nationally appropriate mitigation action
NC	national communication
NE	not estimated
NIR	national inventory report
non-Annex I Parties	Parties not included in Annex I to the Convention
PFC	perfluorocarbon
REDD-plus	In decision 1/CP.16, paragraph 70, the Conference of the Parties encouraged developing country Parties to contribute to mitigation actions in the forest sector by undertaking the following activities: reducing emissions from deforestation; reducing emissions from forest degradation; conservation of forest carbon stocks; sustainable management of forests; and enhancement of forest carbon stocks
Revised 1996 IPCC Guidelines	*Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*
SF_6	sulfur hexafluoride
TNA	technology needs assessment
TTE	team of technical experts
UNFCCC reporting guidelines on BURs	"UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention"

I. Introduction and process overview

A. Introduction

1. The process of ICA consists of two steps: a technical analysis of the submitted BUR and a facilitative sharing of views under the Subsidiary Body for Implementation, resulting in a summary report and record, respectively.

2. According to decision 2/CP.17, paragraph 41(a), non-Annex I Parties, consistently with their capabilities and the level of support provided for reporting, were to submit their first BUR by December 2014.

3. Further, according to paragraph 58(a) of the same decision, the first round of ICA is to commence for non-Annex I Parties within six months of the submission of the Parties' first BURs. The frequency of developing country Parties' participation in subsequent rounds of ICA, depending on their respective capabilities and national circumstances, and the special flexibility for small island developing States and the least developed country Parties, will be determined by the frequency of the submission of BURs.

4. This summary report presents the results of the technical analysis of the first BUR of Mongolia undertaken by a TTE in accordance with the provisions on the composition, modalities and procedures of the TTE under ICA contained in the annex to decision 20/CP.19.

B. Process overview

5. Mongolia submitted its first BUR on 30 August 2017.

6. The technical analysis of the BUR took place from 4 to 8 December 2017 in Bonn, Germany, and was undertaken by the following TTE, drawn from the UNFCCC roster of experts on the basis of the criteria defined in decision 20/CP.19, annex, paragraphs 2–6: Mr. Ricardo Fernandez (member of the CGE from the European Union), Mr. Carlos Fuller (former member of the CGE from Belize), Ms. Danielly Godiva Santana Molleta (Brazil), Ms. Rocio Lichte (member of the CGE from Germany) and Mr. Stanford Mwakasonda (member of the CGE from the United Republic of Tanzania). Mr. Fuller and Ms. Lichte were the co-leads. The technical analysis was coordinated by Ms. Karen Ortega Marin and Mr. Pedro Torres (secretariat).

7. During the technical analysis, in addition to the written exchange, through the secretariat, to provide technical clarifications on the information reported in the BUR, the TTE and Mongolia engaged in consultation[1] on the identification of capacity-building needs for the preparation of BURs and participation in the ICA process. Following the technical analysis of Mongolia's first BUR, the TTE prepared and shared a draft summary report with Mongolia on 1 March 2018 for its review and comment. Mongolia, in turn, provided its feedback on the draft summary report on 25 May 2018.

8. The TTE responded to and incorporated the Party's comments referred to in paragraph 7 above and finalized the summary report in consultation with Mongolia on 6 June 2018.

[1] The consultation was conducted via videoconferencing.

II. Technical analysis of the biennial update report

A. Scope of the technical analysis

9. The scope of the technical analysis is outlined in decision 20/CP.19, annex, paragraph 15, according to which the technical analysis aims to, without engaging in a discussion on the appropriateness of the actions, increase the transparency of mitigation actions and their effects and shall entail the following:

(a) The identification of the extent to which the elements of information listed in paragraph 3(a) of the ICA modalities and guidelines (decision 2/CP.17, annex IV) have been included in the BUR of the Party concerned (see chapter II.B below);

(b) A technical analysis of the information reported in the BUR, specified in the UNFCCC reporting guidelines on BURs (decision 2/CP.17, annex III), and any additional technical information provided by the Party concerned (see chapter II.C below);

(c) The identification, in consultation with the Party concerned, of capacity-building needs related to the facilitation of reporting in accordance with the UNFCCC reporting guidelines on BURs and to participation in ICA in accordance with the ICA modalities and guidelines, taking into account Article 4, paragraph 3, of the Convention (see chapter II.D below).

10. The remainder of this chapter presents the results of each of the three parts of the technical analysis of Mongolia's BUR outlined in paragraph 9 above.

B. Extent of information reported

11. The elements of information referred to in paragraph 9(a) above include the national GHG inventory report; information on mitigation actions, including a description of such actions, an analysis of their impacts and the associated methodologies and assumptions, and the progress made in their implementation; information on domestic MRV; and information on support needed and received.

12. According to decision 20/CP.19, annex, paragraph 15(a), in undertaking the technical analysis of the submitted BUR, the TTE is to identify the extent to which the elements of information listed in paragraph 11 above have been included in the BUR of the Party concerned. The TTE considers that the reported information is mostly consistent with the UNFCCC reporting guidelines on BURs. Specific details on the extent of the information reported for each of the required elements are provided in annex I.

C. Technical analysis of the information reported

13. The technical analysis referred to in paragraph 9(b) above aims to increase the transparency of mitigation actions and their effects, without engaging in a discussion on the appropriateness of those actions. Accordingly, the technical analysis focused on the transparency of the information reported in the BUR.

14. For information reported on national GHG inventories, the technical analysis also focused on the consistency of the methods used for preparing those inventories with the appropriate methods developed by the IPCC and referred to in the UNFCCC reporting guidelines on BURs.

15. The results of the technical analysis are presented in the remainder of this chapter.

1. Information on national circumstances and institutional arrangements relevant to the preparation of national communications on a continuous basis

16. As per the scope defined in paragraph 2 of the UNFCCC reporting guidelines on BURs, the BUR should provide an update to the information contained in the most recently submitted NC, including information on national circumstances and institutional

arrangements relevant to the preparation of NCs on a continuous basis. In their NCs, non-Annex I Parties report on their national circumstances following the reporting guidance contained in decision 17/CP.8, annex, paragraphs 3–5.

17. In accordance with decision 17/CP.8, annex, paragraph 3, Mongolia reported in its first BUR the following information on national circumstances. Mongolia is the 19th largest country in the world and the second largest landlocked country, with mountains covering the northern and western regions and the Gobi Desert in the south. The average elevation is 1,580 m above sea level and the climate is cold and dry. The ecosystems, environment, flora and fauna are significantly changing as a result of socioeconomic challenges and climate change. Although it is one of the most sparsely populated countries in the world, 67 per cent of the population live in the capital, Ulaanbaatar. Mongolia's economy is based on mining and agricultural production. The services sector, including banking, finance and retail, is making an increasing contribution to economic growth. The country's GDP was USD 11.80 billion in 2015. Electricity is distributed via three centralized power grids and two isolated systems. In 2015, 5.5 billion kWh were generated by thermal power plants, 5,323.5 million kWh by hydropower and 65.2 million kWh by wind and solar photovoltaic power. In addition, 1.3 billion kWh electricity was imported. Mongolia is one of the world's leading mining nations, with mining accounting for 17 per cent of GDP and 83 per cent of export earnings. Owing to its large and complex geography and sparse population, the transport sector is of strategic importance: it consists of road, rail, air and water transportation. The vehicle fleet is ageing, with 72.5 per cent being 10 years or older. Mongolia's climate provides limited potential for crop production. Agriculture is focused on animal husbandry, with 80 per cent of the land allocated to pasture.

18. In addition, as encouraged in decision 17/CP.8, annex, paragraph 4, Mongolia provided a summary of relevant information regarding its national circumstances in tabular format. This consisted of several sectoral tables, graphs and a map.

19. Mongolia transparently described in its BUR the existing and planned institutional arrangements relevant to the preparation of its NCs and BURs on a continuous basis. The information reported in the BUR identifies the coordinating institution for and other agencies involved in climate change activities and the elaboration of Mongolia's first BUR. The Ministry of Environment and Tourism of Mongolia develops, updates and implements climate-related policy and is responsible for coordinating the compilation of NCs, BURs and GHG inventories and submitting them to the UNFCCC.

20. Another relevant entity is the Climate Change Project Implementation Unit of the Nature Conservation Fund, which is engaging experienced professionals in facilitating the smooth implementation of commitments under the UNFCCC supervised by the UNFCCC national focal point. The major data provider for the GHG inventory is the National Statistics Office. A number of other entities provide more specific data required for emission estimation, namely the Ministry of Energy, Ministry of Road and Transport Development, Ministry of Agriculture and Light Industry, Ministry of Construction and Urban Development, CDM Bureau, National Renewable Energy Center, Ulaanbaatar Municipality and National Customs Office. The Party's description covers key aspects of the institutional arrangements, such as the legal status and roles and responsibilities of the overall coordinating entity; the involvement and roles of other institutions and experts; mechanisms for information and data exchange; and future improvement plans. For the preparation of its BURs, Mongolia signed a memorandum of understanding on data exchange with many ministries, institutions and agencies to improve both the GHG inventory and the reporting on constraints and gaps and related financial, technical and capacity-building needs and support received.

2. National greenhouse gas emissions by sources and removals by sinks

21. As indicated in table 1 in annex I, Mongolia reported information on its GHG inventory in its BUR mostly in accordance with paragraphs 3–10 of the UNFCCC reporting guidelines on BURs and paragraphs 8–24 of the "Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention", contained in the annex to decision 17/CP.8.

22. Mongolia submitted its first BUR in 2017 and the GHG inventory reported is for 1990–2014, which is consistent with the requirements for the reporting time frame. During the technical analysis week, Mongolia explained that significant efforts were made to improve the inventory for 2014 and that the 2016 inventory will be provided as part of the NC3.

23. Mongolia submitted an NIR as an annex to its BUR.

24. GHG emissions and removals for the 2014 inventory were estimated using mainly tier 1 methodologies from the 2006 IPCC Guidelines. Limited use of tier 2 methodologies was made for the energy (energy industries, manufacturing and construction, and fugitive emissions) and agriculture, forestry and other land use (forest land) sectors.

25. With regard to the methodologies used, information was reported transparently, including the specific methodology and the tier levels and sources of AD used for each category and subcategory. However, the actual values for the AD were not reported for the source categories, except for the agriculture and waste sectors. During the technical analysis, Mongolia explained that new institutional arrangements, initiatives and approaches have been implemented for the preparation of the 2016 inventory, which will also form the basis for developing future inventories that include such information. The TTE noted that providing actual values for AD would increase the transparency of the estimates for all sectors.

26. The total GHG emissions for 2014 reported in the BUR, excluding and including LULUCF, amounted to 34,482.73 and 10,030.80 Gg CO_2 eq, respectively, increases of 57.09 and 1,034.44 per cent, respectively, since 1990 (from 21,950.73 Gg CO_2 eq and –1,073.46 Gg CO_2 eq, respectively). The total GHG emissions including LULUCF reported for 2014 include –8,447.80 Gg CO_2, 540.08 Gg CH_4 and 22.71 Gg N_2O. Mongolia reported emissions of HFCs and PFCs but not SF_6. In 2014, emissions amounted to 96.43 Gg for HFCs and 0.0 Gg for PFCs. During the technical analysis, the Party explained that emissions of SF_6 were not reported because of data availability issues.

27. Other emissions reported include 0.04 Gg nitrogen oxides and 1.54 Gg carbon monoxide. Mongolia did not submit estimates of non-methane volatile organic compounds or sulfur dioxide and did not use notation keys in the summary tables in the BUR where numerical data were not provided. In some cases, the use of numerical figures (i.e. 0.0) was not consistent with the 2006 IPCC Guidelines because such emissions did not occur. During the technical analysis week, Mongolia explained that this was because the reporting tables were generated from the software related to the 2006 IPCC Guidelines, which does not allow for notation keys. In addition, the notation key "NE" was reported for some categories without providing explanations in the BUR as to why such emissions or removals were not estimated; for example, CH_4 and N_2O emissions for category 3.B land categories.

28. Mongolia reported information addressing the tables included in annex 3A.2 to the IPCC good practice guidance for LULUCF and the sectoral reporting tables annexed to the Revised 1996 IPCC Guidelines in the NIR annexed to the BUR.

29. The shares of emissions that different sectors contributed to the total GHG emissions excluding LULUCF in 2014 are: energy, 50.08 per cent; industrial processes, 0.95 per cent; agriculture, 48.51 per cent; and waste, 0.46 per cent.

30. GHG emissions in 2014 from the energy sector amounted to 17,267.79 Gg CO_2 eq. The TTE noted that providing information on the types of fuel used in the country, for example in the details on the reference approach, or explaining why some sources or types of fuel are not considered (e.g. liquefied petroleum gas or natural gas) would increase the transparency of the estimates for the energy sector.

31. Industrial process emissions in 2014 amounted to 328.06 Gg CO_2 eq, with the categories not reported being chemical industry (2.B), electronics industry (2.E) and other product manufacture and use (2.G). During the technical analysis, Mongolia clarified that these categories were excluded due to lack of AD (e.g. on medical use of N_2O). The TTE noted that including emission estimates and using appropriate notation keys for reporting

those industries, as well as for solvent and other product use, would further enhance the transparency of the inventory.

32. For the agriculture sector, Mongolia reported GHG emissions of 16,726.97 Gg CO_2 eq for 2014, with N_2O emissions from agricultural soils and CH_4 emissions from enteric fermentation being identified as key categories. Mongolia used EFs from the 2006 IPCC Guidelines. The burning of savannahs is not considered, given that the ecosystem does not exist in the country. The TTE noted that Mongolia provided the actual AD for some categories (e.g. the number of livestock) in the BUR and references to the specific EFs applied. The TTE commends Mongolia for its improvement plan referred to in the BUR, which states that it will make efforts to develop country-specific EFs for cattle and to collect national data on synthetic fertilizer used.

33. For the LULUCF sector, Mongolia reported GHG emissions and removals for 1990–2014. Overall, the net removals from the LULUCF sector fluctuated between a minimum of 22,950.70 CO_2 eq in 1991 and a maximum of 24,950.95 CO_2 eq in 2009. Net removals reported for 2014 amounted to 24,451.93 CO_2 eq.

34. For the waste sector, Mongolia reported emissions of 159.91 Gg CO_2 eq for 2014, including CH_4 emissions from solid waste disposal sites and from wastewater handling. Emissions from waste incineration were reported as not occurring; furthermore, there was no information provided on CH_4 recovery and flaring. The TTE noted that including information on waste incineration, such as hospital waste, would further enhance the transparency of the inventory.

35. Mongolia annexed to its BUR an NIR containing an update of its NC2, which addressed anthropogenic emissions and removals for 2006. The update was carried out for all years in the period 1990–2006 using methodologies contained in the 2006 IPCC Guidelines, thus generating a consistent 24-year time series. The previous national inventory was prepared using the Revised 1996 IPCC Guidelines, the IPCC good practice guidance and the IPCC good practice guidance for LULUCF. The TTE commends the Party for the use of the more recent 2006 IPCC Guidelines.

36. Mongolia described in its BUR the institutional framework for the preparation of its 2014 GHG inventory (see paras. 19 and 20 above). The Ministry of Environment and Tourism is the governmental body responsible for climate change policy and is also responsible for Mongolia's GHG inventory, which has been prepared with the support of the United Nations Environment Programme.

37. Mongolia conducted a level and trend assessment for the period 1990–2014 (excluding LULUCF) using a tier 1 approach. On the basis of the key category analysis, Mongolia determined the most important key categories to be: CO_2 emissions from energy industries, road transportation and railways in the energy sector; CO_2 removals from forest land remaining forest land in the LULUCF sector; and CH_4 emissions from enteric fermentation and N_2O emissions from managed soils in the agriculture sector. The BUR provides information on quality assurance/quality control measures for all sectors. The TTE commends Mongolia for providing information in accordance with the IPCC good practice guidance.

38. Mongolia reported information on CO_2 fuel combustion using both the sectoral and reference approach. The difference for the 2014 inventory was 5.55 per cent. During the technical analysis, Mongolia explained the consistent negative difference in estimated CO_2 emissions between the reference and sectoral approach over the period 1990–2014, clarifying that there were data issues with regard to the national energy balance, which is incomplete. Mongolia also explained that its experts had the necessary capacity to report using the reference approach. In addition, the Party clarified that the accuracy and completeness of the energy balance is currently being enhanced, with initiatives in place to complete the energy balance and examine any large differences between the two approaches; consequently, the information reported in its subsequent BUR will be improved.

39. Information was reported on international aviation bunker fuels. Mongolia reported international marine bunker emissions as 0.00 kt CO_2 eq. The TTE noted that Mongolia is a

landlocked country and, therefore, the use of "NA" for marine bunkers would further enhance the transparency of the information presented in the inventory.

40. Mongolia also reported information on its use of global warming potential values consistent with those provided by the IPCC in its Second Assessment Report based on the effects of GHGs.

41. Mongolia further reported information on the uncertainty assessment (level) of its national GHG inventory. The uncertainty analysis is based on the tier 1 approach and covers all source categories and all direct GHGs. Mongolia did not report, in the BUR, the level uncertainty for total emissions for 2014, nor the trend uncertainty values for 1990–2014. The TTE commends Mongolia for providing in its BUR detailed information on the selected uncertainty values for AD and EFs and the reasons for their selection.

3. Mitigation actions and their effects, including associated methodologies and assumptions

42. As indicated in table 2 in annex I, Mongolia reported in its BUR, mostly in accordance with paragraphs 11–13 of the UNFCCC reporting guidelines on BURs, information on mitigation actions and their effects, to the extent possible.

43. The information reported provides a clear and comprehensive overview of the Party's mitigation actions and their effects, including national context. In its BUR, Mongolia frames its national mitigation planning and actions in the context of its intended nationally determined contribution (submitted on 24 September 2015), its Sustainable Development Vision (2016), its State Policy on Food and Agriculture (2016), its State Policy on Forest (2015), its State Policy on Energy (2015), its Green Development Policy (2014) and its Solid Waste Management Improvement Program (2014). As defined in its intended nationally determined contribution, Mongolia reported that its mitigation target is to reduce economy-wide emissions, excluding the agriculture sector, by 14 per cent by 2030 compared with the 2010 level.

44. During the technical analysis, Mongolia explained that its top three mitigation policies are its Sustainable Development Vision, Green Development Policy and State Policy on Energy. The three key measures to mitigate emissions are increasing the share of renewable energy in total energy generation; improving the productivity and limiting the number of livestock; and increasing the forest area through regeneration and tree plantation. Other mitigation actions highlighted in the BUR are in the industrial processes, agriculture and waste sectors. Mongolia reported that climate change has been mainstreamed and integrated into its development plans.

45. The Party reported a summary of its mitigation actions in tabular format. Consistent with decision 2/CP.17, annex III, paragraph 12(a), Mongolia reported mitigation actions in the energy, industrial processes, agriculture, forestry and waste sectors, gases affected and progress indicators. A description of mitigation actions, as well as information on quantitative goals, was clearly reported in the BUR.

46. Mitigation actions were reported including information on the methodologies and underlying assumptions used for these mitigation actions, which the Party indicated were based on the 2006 IPCC Guidelines and internal calculations; further details on the methodologies were clearly reported in the BUR. The BUR provides information on assumptions for each sector, such as: (1) population, projection of GDP and basic energy indicators using the LEAP[2] model for the energy sector; (2) the COMAP[3] model for forest land and cropland for LULUCF; (3) future projections considering natural risks and livestock types for the livestock subsector for the agriculture sector; (4) future cement demand and the difference between dry and wet technologies for the industrial processes sector; and (5) population, GDP growth and total amount of waste using a multiple regression equation for the waste sector. The objectives of the mitigation actions were reported and information on the steps taken to implement them was provided in the BUR.

[2] Long-range Energy Alternatives Planning.
[3] Comprehensive Mitigation Assessment Process.

The TTE commends Mongolia for its detailed reporting. However, the TTE noted that some projected emission targets and emission reductions achieved were not included and therefore that the transparency of the information reported could be further enhanced by including a table with information on emissions by sector, emission targets based on policy scenarios and absolute emission reductions.

47. The key policies for mitigating emissions in the energy sector are: the Energy Law, which was approved in 2001 and updated in 2015; the Law on Renewable Energy, which was approved in 2007 and updated in 2015; the Law on Energy Saving (2015); the Green Development Policy; the State Policy on Energy; and the Sustainable Development Vision 2030. The Party's goal for this sector is to reduce GHG emissions by 2 per cent below the 2010 level by 2020, by 7 per cent by 2025 and by 14 per cent by 2030. The mitigation actions are mainly in the areas of improving energy efficiency and promoting renewable energy sources. During the technical analysis, Mongolia explained that financial and natural barriers, such as reduced river discharge, could negatively affect the implementation of its policies. The Party reported that its mitigation measures were derived from projects that are implemented, ongoing or planned. Three large-scale and six small-scale hydropower plants are in operation, with an installed capacity of 25,975 MW. The Taishir hydropower plant, with a capacity of 11 MW, has been in operation since 2008; however, owing to water scarcity, it has only had a capacity of between 3.5 and 4.1 MW. Annual production at the plant is 12.4 GWh and between November 2008 and May 2012 it reduced emissions by 19,182 t CO_2 eq. The Durgun hydropower plant, with a capacity of 12 MW, has been in operation since 2008 and had generated 200.2 GWh electricity until 2015. From November 2008 to May 2012, it reduced emissions by 57,768 t CO_2 eq. A wind park with a capacity of 50 MW has been in operation since 2013 and reduced emissions by 437,538 t CO_2 eq from 2013 to 2016.

48. Additionally, from 2000 to 2012, 100,146 photovoltaic systems with a capacity of 5 MW were distributed to rural households. A photovoltaic system with a capacity of 10 MW was installed in Darkhan in December 2016. Since 2014, the share of installed renewable energy has been 7.6 per cent of total installed capacity. In the BUR and the subsequent analysis, Mongolia explained that this share will increase to 20 per cent by 2020, 25 per cent by 2025 and 30 per cent by 2030. The internal energy use of combined heat and power plants will be reduced from 14.4 per cent in 2014 to 11.2 per cent in 2023 and to 9.1 per cent in 2030. A 17 km transmission line was installed in 2015 and the overload of five feeders reduced. Electricity transmission and distribution losses have already been reduced from 14.7 per cent in 2014 to 14.2 per cent in 2015 and the efficiency of combined heat and power plants increased from 14.4 per cent in 2014 to 14.1 per cent in 2015. Heat loss from buildings will be reduced by 20 per cent by 2020 and by 40 per cent by 2030.

49. In its BUR, Mongolia provided information on NAMAs. A NAMA project in the construction sector, which will increase energy efficiency, was registered in 2016. The NAMA for the Urban Passenger Transport Ulaanbaatar project, registered in 2016, will improve transport networks and increase the share of hydrogen and low fuel consumption vehicles. The share of private hybrid road vehicles is expected to increase from 6.5 per cent in 2014 to 13 per cent in 2030. The expected results of NAMAs were reported but not in terms of emission reductions. The TTE noted that the transparency of the information on the results expected and achieved from NAMAs could be further enhanced by providing estimated emission reductions.

50. For the industrial processes sector, Mongolia reported in its BUR that it approved the State Policy on Industry in 2015. The key measure to reduce emissions in the industrial processes sector is to convert cement production from wet to dry processing. Through the introduction of dry processing technology, emissions were reduced at the Cement and Lime Co. Ltd. by 8,400 t CO_2 eq in 2014 and by 10,200 t CO_2 eq in 2015. Sectoral emission reductions expected are 664,000 t CO_2 eq and 1,147,400 t CO_2 eq through technology improvements by 2020 and 2030, respectively, and 91,000 t CO_2 eq and 157,000 t CO_2 eq through energy savings by 2020 and 2030, respectively. Mongolia will also develop its chemical industry in order to meet its domestic petroleum demand and reduce fuel consumption. The expected results of the measures were reported but not in terms of emission reductions.

51. For the agriculture sector, Mongolia reported that the Mongolian Livestock National Program was approved in 2010 and the new State Policy on Food and Agriculture was approved in 2015. The mitigation objectives are to improve the productivity of livestock by modifying the livestock herd (in terms of number, type, composition of livestock) and to improve the yield of cultivated fields through irrigation. Three different estimates of livestock numbers and the tier 1 EF from the 2006 IPCC Guidelines were used to estimate emission reductions of 15 per cent, or 1,700 Gg CO_2 eq, by 2020 and 21 per cent, or 3,070 Gg CO_2 eq, by 2030 compared with the 'business as usual' scenario. Zero- and low-tillage technology will be employed to reduce emissions, improve soil fertility and quality, and reduce erosion. Further, the national Third Campaign for Reclamation programme led to increases in the cultivated area by 2.3 times and the yield by 3.2 times from 2007 to 2010. The irrigated farming area increased by 2.1 times by 2010. Zero tillage will be employed in 70 per cent of the farming area by 2020, resulting in emission reduction of 323 kt CO_2 eq, in 85 per cent of the area by 2025, with 400 kt CO_2 eq emission reduction, and in 90 per cent of the area by 2025, resulting in 485 kt CO_2 eq emission reduction by 2030.

52. For the forestry sector, Mongolia defined several mitigation actions as per the objectives of the State Policy on Forest (2015), covering deforestation and forest degradation, forest reclamation and the promotion of robust forest management. Forest cover and sinks are expected to increase, losses to pests and diseases to decrease and area prone to forest fires to decrease. The forest plantation area will be increased by 30,000 ha by 2016 and by 60,000 ha by 2021 compared with the 2010 level. The area affected by forest fires will be reduced by up to 30 per cent below the current level in 2020 and there will be an increase in naturally grown and cultivated forest area (310,000 ha). Emissions from deforestation and forest degradation will be reduced by 2 per cent in the period 2015–2020. The area affected by forest fires will be further reduced by up to 70 per cent in 2030, while the natural forest area will increase to 1.5 million ha and the emissions from forest degradation will be reduced by 5 per cent compared with the 2010 level. Mongolia will enhance forest absorption of GHGs by intensifying reforestation efforts and expanding forest areas to 8.5 per cent of its total territory in 2020 and to 9 per cent in 2030 compared with the 2010 level.

53. For the waste sector, it was reported that, through the Solid Waste Management Improvement Program (2014), the National Action Program on Climate Change (2011), the Green Development Policy (2014) and the Sustainable Development Vision 2030, recycling of packages will be increased by 7.6 per cent above the 2013 level by 2022 and a solid waste classification, processing and recycling factory to produce fuel will be constructed. By 2027, Mongolia should be able to fully recycle and reuse solid waste. Projections of GHG emission reductions were estimated by the National Statistics Office under three different scenarios: the 'low' scenario would result in emission reductions of 121.36 kt CO_2 eq by 2030, 124.15 kt CO_2 eq for the 'medium' scenario and 127.59 kt CO_2 eq for the 'high' scenario.

54. Mongolia provided information on its involvement in international market mechanisms as a Party to the Kyoto Protocol. Mongolia has documented five CDM projects approved by its designated national authority and five verified CDM projects under the UNFCCC CDM process. The statistics include information on the total projects, sectors covered and quantity of certified emission reduction units issued for Mongolia. Mongolia also provided information on the Joint Crediting Mechanism with Japan, which includes four registered projects in the energy sector.

55. Mongolia reported information on its domestic MRV arrangements consistent with decision 2/CP.17, annex III, paragraph 13. The information reported indicates that Mongolia is in the process of developing and designing a domestic MRV system for mitigation actions. The current MRV system is project based to meet the CDM and Joint Crediting Mechanism reporting requirements.

4. Constraints and gaps, and related technology, financial, technical and capacity-building needs, including a description of support needed and received

56. As indicated in table 3 in annex I, Mongolia reported in its BUR, completely in accordance with paragraphs 14–16 of the UNFCCC reporting guidelines on BURs,

information on finance, technology and capacity-building needs and support received. Mongolia reported information on financial resources, technology transfer, capacity-building needs and technical support received from the GEF and other multilateral institutions consistent with decision 2/CP.17, annex III, paragraph 16.

57. Mongolia reported information on constraints and gaps and related financial, technical and capacity-building needs. It explained that the information should be analysed together with the information on technology and financial needs provided in its NC2, submitted in 2010. The Party reported that its financial, technical and capacity-building needs are mainly focused on the implementation of adaptation and mitigation measures. In its BUR, Mongolia provided a table containing the needs for preparing and implementing planned mitigation projects related to its NAMAs. The Party's financial, technical and capacity-building needs were justified by the lack of appropriate technologies and financial support for the implementation of projects related to renewable energy, clean fuel production and a carbon dioxide capture and storage plant. Mongolia explained that these measures are subject to high upfront investment and recurring operating costs totalling USD 3.5 billion. Mongolia also explained to the TTE that it is expecting to use a range of financial instruments, including international funding, loans, public–private partnerships and funding from the private sector and beneficiaries, to complement national resources.

58. Mongolia reported information on financial resources, technology transfer, capacity-building and technical support received. Mongolia reported that it had received USD 1,327,000 from the GEF, which included financial resources for its first BUR preparation and capacity-building for the Building Energy Efficiency Project. The information reported indicated that Mongolia received capacity-building, technical support and technology transfer from Parties included in Annex II to the Convention and other developed country Parties and other sources to strengthen national adaptation and mitigation capacity. The TTE recognized Mongolia's efforts to report this information in a transparent manner and commends the Party for doing so.

59. Mongolia reported information on its technology needs and the technology support received. This information was presented in its BUR with cross references to its NC2. The Party informed the TTE that a TNA was conducted for the energy sector. Further, during the technical analysis, Mongolia clarified that there is a strong need to undertake a further TNA. In 2013 the Government of Mongolia conducted a TNA on mitigation and adaptation with the support of the GEF through the United Nations Environment Programme. However, the information included in the 2013 TNA needs to be updated and amended consistent with emerging international and domestic climate change policies and strategies. Mongolia will require enhanced financial and technical support to conduct a new TNA.

60. The TTE commends Mongolia for the transparent reporting on technology, financial, technical and capacity-building needs in its BUR.

5. Any other information

61. Mongolia reported some information on its participation in REDD-plus and the establishment of its National REDD+ Roadmap Taskforce with the participation of 20 members representing the Government, the private sector and civil society. The initiative will support the Government of Mongolia in defining and implementing activities as part of its REDD+ National Strategy. In addition, the Party presented information on measures that reduce air pollution as a co-benefit of the implementation of actions related to energy efficiency.

D. Identification of capacity-building needs

62. In consultation with Mongolia, the TTE identified the following capacity-building needs related to the facilitation of the preparation of subsequent BURs and participation in ICA:

(a) To train key players and organizations involved in the GHG inventory preparation process in line with the planned decentralization of the process;

(b) To collect, interpret and process data on estimates of emissions/removals for land categories in the agriculture, forestry and other land-use sector;

(c) To collect, interpret and process data for the estimation of the missing categories of fluorinated gas emissions in the industrial processes and product use sector;

(d) To enhance understanding of the use of the notation keys;

(e) To use the software related to the 2006 IPCC Guidelines to conduct the key category analysis;

(f) To compile and complete the national energy balance;

(g) To enhance capacity for achieving GHG mitigation targets;

(h) To enhance the institutional arrangements and coordination for the development of the national MRV system;

(i) To obtain financial and technical support to conduct a new TNA.

63. The TTE noted that, in addition to those identified during the technical analysis, Mongolia reported in its BUR the following capacity-building needs for preparing and implementing mitigation projects:

(a) Improving the insulation of 300 existing apartment buildings in Ulaanbaatar;

(b) Installing large hydropower facilities with a capacity of 675 MW;

(c) Installing wind power facilities with a capacity of 354 MW;

(d) Installing solar photovoltaic power facilities with a capacity of 145 MW;

(e) Improving the efficiency of coal-fired power plants.

III. Conclusions

64. The TTE conducted a technical analysis of the information reported in the first BUR of Mongolia in accordance with the UNFCCC reporting guidelines on BURs. The TTE concludes that the reported information is mostly consistent with the UNFCCC reporting guidelines on BURs and provides an overview of: national circumstances and institutional arrangements relevant to the preparation of NCs on a continuous basis; the national inventory of anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol, including an NIR; mitigation actions and their effects, including associated methodologies and assumptions; constraints and gaps and related financial, technical and capacity-building needs, including a description of support needed and received; the level of support received to enable the preparation and submission of BURs; and domestic MRV development. During the technical analysis, additional information was provided by Mongolia on its GHG inventory and capacity-building needs. The TTE concluded that the information analysed is mostly transparent.

65. Mongolia transparently described in its BUR the institutional arrangements relevant to the preparation of BURs, covering the legal status and roles and responsibilities of the overall coordinating entity; the involvement and roles of other institutions and experts; mechanisms for information and data exchange; and future improvement plans. The Ministry of Environment and Tourism of Mongolia is the entity responsible for developing, updating and implementing climate-related policy and coordinating the compilation of national reports (NC, BUR, NIR). Another relevant entity is the Climate Change Project Implementation Unit of the Nature Conservation Fund, which is engaging experienced professionals in facilitating the smooth implementation of commitments under the UNFCCC supervised by the UNFCCC national focal point. Other relevant entities that provide key data required for emission estimation are the Ministry of Energy, Ministry of Road and Transport Development, Ministry of Agriculture and Light Industry, Ministry of Construction and Urban Development, CDM Bureau and National Renewable Energy Center. The TTE commends Mongolia for its efforts to report on its institutional arrangements in a transparent manner.

66. In its first BUR, submitted in 2017, Mongolia reported transparent information on its national GHG inventory for 1990–2014. This included GHG emissions and removals of CO_2, CH_4 and N_2O for all relevant sources and sinks as well as the precursor gases. Estimates of fluorinated gases were partly provided (excluding PFCs and SF_6) owing to difficulties in obtaining the necessary data, as clarified by the Party during the technical analysis. The inventory was developed on the basis of the 2006 IPCC Guidelines. The total GHG emissions for 2014 were reported as 34,482.73 Gg CO_2 eq (excluding LULUCF) and 10,030.80 Gg CO_2 eq (including LULUCF). Twenty key categories were identified, with CO_2 and the energy sector identified as the main gas and key category, respectively.

67. Mongolia reported information on mitigation actions and their effects in a transparent manner. As defined in its intended nationally determined contribution, Mongolia reported that its mitigation target is to reduce economy-wide emissions, excluding the agriculture sector, by 14 per cent by 2030 compared with the 2010 level. Mongolia provided in its BUR a detailed description of its mitigation actions, estimation methodologies used, expected outcomes and progress achieved. Expected emission reductions of 25 per cent below the 2010 level by 2025 and 28 per cent by 2030, provided all national programmes and policies are implemented, were reported. The key mitigation actions reported in the BUR are: increasing the share of renewable energy in energy production, energy efficiency programmes for the transmission system and buildings, and increasing the number of efficient vehicles in the energy sector; advancing technology and supplying fuel demand through domestic production in the industrial processes sector; improving livestock productivity, retaining the proper ratio of the number, type and structure of the herd, modifying traditional plough technology, and establishing forest strip zones on arable land in the agriculture sector; increasing the natural forest area and reducing the forest area affected by fires in the forestry sector; and, finally, implementing reduction, recycling and incineration programmes in the waste sector.

68. The TTE acknowledges the efforts made by Mongolia to report transparently on constraints and gaps and related financial, technical and capacity-building needs, as well as on financial resources, technology transfer, capacity-building and technical support received. Mongolia reported that its financial, technical and capacity-building needs are mainly focused on the implementation of adaptation and mitigation measures given the lack of appropriate technologies and financial support for the implementation of projects related to renewable energy, clean fuel production and a carbon dioxide capture and storage plant in the country. Mongolia clarified during the technical analysis that these measures are subject to high upfront investment and recurring operating costs; therefore, it is expecting to use a range of financial instruments, including international funding, loans, public–private partnerships and funding from the private sector. During the technical analysis, Mongolia explained that this information in the BUR is complemented by the information on technology and financial needs provided in its NC2, submitted in 2010, and provided information on its capacity-building needs for updating and amending its TNA.

69. The TTE, in consultation with Mongolia, identified the nine capacity-building needs listed in paragraph 62 above that aim to facilitate reporting in accordance with the UNFCCC reporting guidelines on BURs and participation in ICA in accordance with the ICA modalities and guidelines, taking into account Article 4, paragraph 3, of the Convention.

Annex I

Extent of the information reported by Mongolia in its first biennial update report

Table 1
Identification of the extent to which the elements of information on greenhouse gases are included in the first biennial update report of Mongolia

Decision	*Provision of the reporting guidelines*	*Yes, partly, no, NA*	*Comments on the extent of the information provided*
Decision 2/CP.17, paragraph 41(g)	The first BUR shall cover, at a minimum, the inventory for the calendar year no more than four years prior to the date of the submission, or more recent years if information is available, and subsequent BURs shall cover a calendar year that does not precede the submission date by more than four years.	Yes	Mongolia submitted its first BUR in August 2017; the GHG inventory reported is for 2014.
Decision 2/CP.17, annex III, paragraph 4	Non-Annex I Parties should use the methodologies established by the latest UNFCCC guidelines for the preparation of NCs from non-Annex I Parties approved by the Conference of the Parties or those determined by any future decision of the Conference of the Parties on this matter.	Yes	Mongolia used the 2006 IPCC Guidelines.
Decision 2/CP.17, annex III, paragraph 5	The updates of the sections on the national inventories of anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol should contain updated data on activity levels based on the best information available using the Revised 1996 IPCC Guidelines, the IPCC good practice guidance and the IPCC good practice guidance for LULUCF; any change to the EF may be made in the subsequent full NC.	Yes	
Decision 2/CP.17, annex III, paragraph 6	Non-Annex I Parties are encouraged to include, as appropriate and to the extent that capacities permit, in the inventory section of the BUR:	Yes	
	(a) Tables included in annex 3A.2 to the IPCC good practice guidance for LULUCF;	Yes	Comparable information was reported in annex I to the BUR.
	(b) The sectoral report tables annexed to the Revised 1996 IPCC Guidelines.	Yes	Comparable information was reported.
Decision 2/CP.17, annex III, paragraph 7	Each non-Annex I Party is encouraged to provide a consistent time series back to the years reported in the previous NCs.	Yes	
Decision 2/CP.17, annex III, paragraph 8	Non-Annex I Parties that have previously reported on their national GHG inventories contained in their NCs are encouraged to submit summary information tables of inventories for previous submission years (e.g. for 1994 and 2000).	Yes	This information was reported for 1990 at a disaggregated level and for 1991–2013 at an aggregated level.
Decision 2/CP.17, annex III, paragraph 9	The inventory section of the BUR should consist of an NIR as a summary or as an update of the information contained in decision 17/CP.8, annex, chapter III (National greenhouse gas inventories), including:		
	(a) Table 1 (National greenhouse gas inventory of anthropogenic emissions by sources and removals by	Yes	Comparable information was reported in the table

Decision	*Provision of the reporting guidelines*	*Yes/partly/no/NA*	*Comments on the extent of the information provided*
	sinks of all greenhouse gases not controlled by the Montreal Protocol and greenhouse gas precursors);		in annex I.
	(b) Table 2 (National greenhouse gas inventory of anthropogenic emissions of HFCs, PFCs and SF_6).	Yes	Comparable information was reported in the table in annex I, covering HFC emissions only (PFCs reported as 0.0).
Decision 2/CP.17, annex III, paragraph 10	Additional or supporting information, including sector-specific information, may be supplied in a technical annex.	Yes	The Party submitted an NIR as an annex to its BUR.
Decision 17/CP.8, annex, paragraph 13	Non-Annex I Parties are encouraged to describe procedures and arrangements undertaken to collect and archive data for the preparation of national GHG inventories, as well as efforts to make this a continuous process, including information on the role of the institutions involved.	Yes	Information on procedures and institutional arrangements was reported.
Decision 17/CP.8, annex, paragraph 14	Each non-Annex I Party shall, as appropriate and to the extent possible, provide in its national inventory, on a gas-by-gas basis and in units of mass, estimates of anthropogenic emissions of:		
	(a) CO_2;	Yes	
	(b) CH_4;	Yes	
	(c) N_2O.	Yes	
Decision 17/CP.8, annex, paragraph 15	Non-Annex I Parties are encouraged, as appropriate, to provide information on anthropogenic emissions by sources of:		
	(a) HFCs;	Yes	
	(b) PFCs;	Yes	PFC emissions were reported as 0.0. The Party explained that this was because they were occurring but insignificant.
	(c) SF_6.	No	Emissions of SF_6 were not reported owing to data collection challenges.
Decision 17/CP.8, annex, paragraph 16	Non-Annex I Parties are encouraged, as appropriate, to report on anthropogenic emissions by sources of other GHGs, such as:		
	(a) Carbon monoxide;	Yes	
	(b) Nitrogen oxides;	Yes	
	(c) Non-methane volatile organic compounds.	No	The Party used the 2006 IPCC Guidelines, which do not provide a methodology for estimating these emissions.
Decision 17/CP.8, annex, paragraph 17	Other gases not controlled by the Montreal Protocol, such as sulfur oxides, included in the Revised 1996 IPCC Guidelines may be included at the discretion of the Parties.	No	
Decision 17/CP.8, annex, paragraph 18	Non-Annex I Parties are encouraged, to the extent possible and if disaggregated data are available, to estimate and report CO_2 fuel combustion emissions using both the sectoral and the reference approach	Yes	

Decision	*Provision of the reporting guidelines*	*Yes/partly/no/NA*	*Comments on the extent of the information provided*
	and to explain any large differences between the two approaches.		
Decision 17/CP.8, annex, paragraph 19	Non-Annex I Parties should, to the extent possible and if disaggregated data are available, report emissions from international aviation and marine bunker fuels separately in their inventories:		
	(a) International aviation;	Yes	
	(b) Marine bunker fuels.	NA	Marine bunker fuels are not applicable to Mongolia because it is a landlocked country.
Decision 17/CP.8, annex, paragraph 20	Non-Annex I Parties wishing to report on aggregated GHG emissions and removals expressed in CO_2 eq should use the global warming potential provided by the IPCC in its Second Assessment Report based on the effects of GHGs over a 100-year time-horizon.	Yes	
Decision 17/CP.8, annex, paragraph 21	Non-Annex I Parties are encouraged to provide information on methodologies used in the estimation of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol, including a brief explanation of the sources of EFs and AD. If non-Annex I Parties estimate anthropogenic emissions and removals from country-specific sources and/or sinks that are not part of the Revised 1996 IPCC Guidelines, they should explicitly describe the source and/or sink categories, methodologies, EFs and AD used in their estimation of emissions, as appropriate. Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building:		
	(a) Information on methodologies used in the estimation of anthropogenic emissions by sources and removals by sinks of GHGs not controlled by the Montreal Protocol;	Yes	Mongolia used the 2006 IPCC Guidelines.
	(b) Explanation of the sources of EFs;	Yes	Mongolia used the 2006 IPCC Guidelines.
	(c) Explanation of the sources of AD;	Yes	Mongolia used the 2006 IPCC Guidelines.
	(d) If non-Annex I Parties estimate anthropogenic emissions and removals from country-specific sources and/or sinks that are not part of the Revised 1996 IPCC Guidelines, they should explicitly describe:	NA	
	(i) Source and/or sink categories;		
	(ii) Methodologies;		
	(iii) EFs;		
	(iv) AD;		
	(e) Parties are encouraged to identify areas where data may be further improved in future communications through capacity-building.	Yes	Additional capacity-building areas were identified during the ICA.
Decision 17/CP.8, annex, paragraph 22	Each non-Annex I Party is encouraged to use tables 1 and 2 of the guidelines annexed to decision 17/CP.8 in reporting its national GHG inventory, taking into account the provisions established in	Partly	Mongolia included tables 1 and 2 in the NIR. Notation keys were not used.

Decision	*Provision of the reporting guidelines*	*Yes/partly/no/NA*	*Comments on the extent of the information provided*
	paragraphs 14–17. In preparing those tables, Parties should strive to present information that is as complete as possible. Where numerical data are not provided, Parties should use the notation keys as indicated.		
Decision 17/CP.8, annex, paragraph 24	Non-Annex I Parties are encouraged to provide information on the level of uncertainty associated with inventory data and their underlying assumptions, and to describe the methodologies used, if any, for estimating these uncertainties:		
	(a) Level of uncertainty associated with inventory data;	Yes	
	(b) Underlying assumptions;	Yes	
	(c) Methodologies used, if any, for estimating these uncertainties.	Yes	

Note: The parts of the UNFCCC reporting guidelines on BURs on reporting information on GHG emissions by sources and removals by sinks in BURs are contained in decision 2/CP.17, paragraphs 3–10 and 41(g). Further, as per paragraph 3 of those guidelines, non-Annex I Parties are to submit updates of their national GHG inventories in accordance with paragraphs 8–24 of the "Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention", contained in the annex to decision 17/CP.8. The scope of such updates should be consistent with the non-Annex I Party's capacity and time constraints and the availability of its data, as well as the level of support provided by developed country Parties for biennial update reporting.

Table 2
Identification of the extent to which the elements of information on mitigation actions are included in the first biennial update report of Mongolia

Decision	*Provision of the reporting guidelines*	*Yes/partly/no*	*Comments on the extent of the information provided*
Decision 2/CP.17, annex III, paragraph 11	Non-Annex I Parties should provide information, in a tabular format, on actions to mitigate climate change by addressing anthropogenic emissions by sources and removals by sinks of all GHGs not controlled by the Montreal Protocol.	Yes	
Decision 2/CP.17, annex III, paragraph 12	For each mitigation action or group of mitigation actions, including, as appropriate, those listed in document FCCC/AWGLCA/2011/INF.1, developing country Parties shall provide the following information, to the extent possible:		
	(a) Name and description of the mitigation action, including information on the nature of the action, coverage (i.e. sectors and gases), quantitative goals and progress indicators;	Partly	Information on the quantitative goals and progress indicators for some[a] mitigation actions in the energy, industrial processes, agriculture and forestry sectors was reported. No information was provided for the waste sector or the livestock subsector.
	(b) Information on:		
	(i) Methodologies;	Yes	The Party used the LEAP model to estimate future emissions from the energy sector.
	(ii) Assumptions;	Yes	Information from the National Statistics Office was used for population, number of households, GDP and livestock and to estimate changes in biomass.
	(c) Information on:		
	(i) Objectives of the action;	Yes	
	(ii) Steps taken or envisaged to achieve that action;	Yes	
	(d) Information on:		
	(i) Progress of implementation of the mitigation actions;	Yes	Some of the actions are planned and some are ongoing. None have been completed.
	(ii) Progress of implementation of the underlying steps taken or envisaged;	Yes	
	(iii) Results achieved, such as estimated outcomes (metrics depending on type of action) and estimated emission reductions, to the extent possible;	Partly	The Party reported results achieved, but the results of some mitigation actions, such as NAMAs, were not reported in terms of emission reductions.
	(e) Information on international market mechanisms.	Yes	Mongolia reported that it has five registered CDM projects, four of which have issued a total of 699,177 certified emission reduction units, equivalent to 288,911 t CO_2 eq emission reductions per year.

Decision	*Provision of the reporting guidelines*	*Yes/partly/no*	*Comments on the extent of the information provided*
Decision 2/CP.17, annex III, paragraph 13	Parties should provide information on the description of domestic MRV arrangements.	Yes	Mongolia has gained experience in elements of an MRV system through the CDM and Joint Crediting Mechanism processes. Mongolia is striving for a broader, more robust MRV system.

Note: The parts of the UNFCCC reporting guidelines on BURs on the reporting of information on mitigation actions in BURs are contained in decision 2/CP.17, annex III, paragraphs 11–13.

[a] "Some" is used when the information is provided for at least half of the mitigation actions reported.

Table 3

Identification of the extent to which the elements of information on finance, technology and capacity-building needs and support received are included in the first biennial update report of Mongolia

Decision	*Provision of the reporting requirements*	*Yes/partly/no*	*Comments on the extent of the information provided*
Decision 2/CP.17, annex III, paragraph 14	Non-Annex I Parties should provide updated information on:		
	(a) Constraints and gaps;	Yes	
	(b) Related financial, technical and capacity-building needs.	Yes	
Decision 2/CP.17, annex III, paragraph 15	Non-Annex I Parties should provide:		
	(a) Information on financial resources received, technology transfer and capacity-building received;	Yes	
	(b) Information on technical support received from the GEF, Parties included in Annex II to the Convention and other developed country Parties, the Green Climate Fund and multilateral institutions for activities relating to climate change, including for the preparation of the current BUR.	Yes	
Decision 2/CP.17, annex III, paragraph 16	With regard to the development and transfer of technology, non-Annex I Parties should provide information on:		
	(a) Technology needs, which are nationally determined;	Yes	
	(b) Technology support received.	Yes	

Note: The parts of the UNFCCC reporting guidelines on BURs on the reporting of information on finance, technology and capacity-building needs and support received in BURs are contained in decision 2/CP.17, annex III, paragraphs 14–16.

Annex II

Documents and information used during the technical analysis

Reference documents

IPCC. 1997. *Revised 1996 IPCC Guidelines for National Greenhouse Gas Inventories*. JL Houghton, LG Meira Filho, B Lim, et al. (eds.). Paris: IPCC/Organisation for Economic Co-operation and Development/International Energy Agency.
Available at https://www.ipcc-nggip.iges.or.jp/public/gl/invs1.html.

IPCC. 2000. *Good Practice Guidance and Uncertainty Management in National Greenhouse Gas Inventories*. J Penman, D Kruger, I Galbally, et al. (eds.). Hayama, Japan: IPCC/Organisation for Economic Co-operation and Development/International Energy Agency/Institute for Global Environmental Strategies.
Available at http://www.ipcc-nggip.iges.or.jp/public/gp/english/.

IPCC. 2003. *Good Practice Guidance for Land Use, Land-Use Change and Forestry*. J Penman, M Gytarsky, T Hiraishi, et al. (eds.). Hayama, Japan: Institute for Global Environmental Strategies.
Available at http://www.ipcc-nggip.iges.or.jp/public/gpglulucf/gpglulucf.html.

IPCC. 2006. *2006 IPCC Guidelines for National Greenhouse Gas Inventories*. S Eggleston, L Buendia, K Miwa, et al. (eds.). Hayama, Japan: Institute for Global Environmental Strategies.
Available at http://www.ipcc-nggip.iges.or.jp/public/2006gl.

"Composition, modalities and procedures of the team of technical experts for undertaking the technical analysis of biennial update reports from Parties not included in Annex I to the Convention". Annex to decision 20/CP.19. Available at http://unfccc.int/resource/docs/2013/cop19/eng/10a02.pdf#page=12.

"Modalities and guidelines for international consultation and analysis". Annex IV to decision 2/CP.17. Available at http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf.

"UNFCCC biennial update reporting guidelines for Parties not included in Annex I to the Convention". Annex III to decision 2/CP.17. Available at http://unfccc.int/resource/docs/2011/cop17/eng/09a01.pdf.

"Guidelines for the preparation of national communications from Parties not included in Annex I to the Convention". Annex to decision 17/CP.8. Available at http://unfccc.int/resource/docs/cop8/07a02.pdf#page=2.

First BUR of Mongolia. Available at http://unfccc.int/8722.php.

First and second NCs of Mongolia. Available at http://unfccc.int/10124.php.